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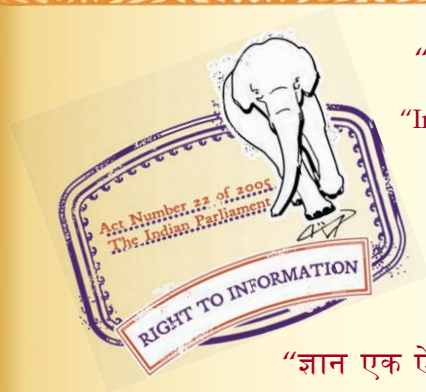
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IS 3687 (1987): Pressure Sensitive Adhesive Cloth Tapes
[PCD 12: Plastics]

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Indian Standard

**SPECIFICATION FOR
PRESSURE SENSITIVE ADHESIVE CLOTH TAPES
(*Second Revision*)**

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR PRESSURE SENSITIVE ADHESIVE CLOTH TAPES

(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards on 10 November 1987, after the draft finalized by the Adhesives Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

0.2 Some of the common uses of pressure sensitive cloth tapes are for packing heavy articles, such as pipe-lines, fittings, neon tubes, and cables so as to protect heavy polished surfaces against scratches and abrasion. They are also used for sealing bags, cans, cartons and other heavy duty containers to protect them from moisture and contamination.

0.3 This standard was first published in 1966 and subsequently revised in 1977 incorporating requirements for durability and keeping quality. In this second revision, requirements like pH, chloride content and sulphate content have been deleted as these are considered redundant and a modified durability test has been incorporated.

0.4 While no specific requirements have been laid down for freedom from deleterious materials and toxicity, and their effect on the cloth tapes, it is recommended that the adhesive composition used for coating should be free from such materials which have deleterious effect on the cloth and which are known to be toxic.

0.5 This standard contains clauses 4.2, 4.3, 4.5 and 4.6 which call for agreement between the purchaser and the supplier.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the requirements and methods of sampling and test for pressure sensitive adhesive cloth tapes.

1.1.1 This standard excludes adhesive insulating cloth tapes used for electrical purposes.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 3434-1984* shall apply.

3. TYPES

3.1 There shall be two types of cloth tapes as follows:

- a) Type 1 — Untreated cloth tapes, and
- b) Type 2 — Waterproofed cloth tapes coated with polyvinyl chloride or its copolymer,

nitrocellulose, polyethylene or any other suitable material on its outer side.

4. REQUIREMENTS

4.1 Description

4.1.1 The pressure sensitive adhesive cloth tape shall consist of good quality fabric, coated uniformly on one side with a suitable pressure sensitive adhesive composition, requiring no moisture, heat or other special preparation prior to application.

4.1.2 The rolls shall be wound uniformly and evenly so that each succeeding turn coincides with the one below it.

4.1.3 Each roll of tape shall be reasonably free from overlapping, depressions and distortion and shall unroll without off-setting of the adhesive mass or tearing of the cloth.

*Glossary of terms for adhesives and pressure sensitive adhesive tapes (first revision).

4.2 Colour — The colour of the tape shall be as agreed to between the purchaser and the supplier.

4.3 Printing — If required by the purchaser, the printing of the tape on the outer side shall be done as agreed to between the purchaser and the supplier. In that case, the printing shall be legible and the printing shall not transfer to the adhesive side of the adjacent turn.

4.4 Cores — All tapes shall be wound on cores of internal diameter 75.0 ± 1.5 mm, 50.0 ± 1.0 mm or 25.0 ± 0.5 mm, or as agreed to between the purchaser and the supplier and shall have sufficient rigidity to prevent the distortion of the roll under normal conditions of transportation and use.

4.5 Width — The width of the tape shall be as agreed to between the purchaser and the supplier and none of the five observations for width measured suitably shall fall outside the tolerance given below. The width shall be determined by taking five determinations at random in a length of not less than one metre of tape from each sample roll:

Nominal Width (mm)	Tolerance (mm)
Up to 25	± 1.0
Over 25	± 1.5

4.6 Length — The length of the roll shall be as agreed to between the purchaser and the supplier and shall not vary by more than one percent from the specified length. When determined by unrolling the roll on a suitable winding machine fitted with a length metre capable of measuring to 0.1 metre.

4.7 Splices — A roll of tape shall not have more than one splice per 20 metres. The splices shall be so made as not to separate when unwound from the rolls.

4.8 Adhesion to Metal and Self — The adhesion to metal and self shall be not less than 2 N per 10 mm width when determined by the method as prescribed in 5 and 13 of IS : 8402-1987*.

4.9 Stability — The tape shall part neatly from the underlayer and shall show no evidence of deterioration in the adhesive or backing so as to make the tape unfit for use when aged as prescribed in 14 in IS : 8402-1987*. The adhesion to metal and self of the tape shall not decrease by more than 12 percent when determined by the method prescribed in 5 and 13 of IS : 8402-1987* respectively.

4.10 Breaking Strength — The breaking strength of the tape shall be not less than 50 N per 10 mm width when determined by the method as prescribed in 6 of IS : 8402-1987*.

4.11 Anchorage — The adhesive mass shall not come off from the cloth when tested as prescribed in 7 of IS : 8402-1987*.

4.12 Durability Test — The tape shall pass the test when tested according to the method prescribed in 12 of IS : 8402-1987*.

4.13 Keeping Quality — The rolls when stored on their cut edges in original unopened containers at $27 \pm 2^\circ\text{C}$ and 65 ± 5 percent relative humidity shall continue to comply with the requirements prescribed in 4 for a minimum period of one year from the date of manufacture.

4.14 Additional Requirement for Type 2 Tapes

4.14.1 Adhesion After Immersion in Water — The adhesion to metal shall be not less than as given in 4.8 when immersed in water and tested as prescribed in 10 of IS : 8402-1987*.

4.14.2 Water Vapour Permeability — The tape shall have water vapour permeability of not more than 200 g/m^2 when tested as prescribed in 11 of IS : 8402-1987*.

5. PACKING AND MARKING

5.1 Packing — The rolls shall be packed in suitable containers so that these are adequately protected from damage in transportation and from deterioration due to climatic conditions. They shall not adhere to each other or to the container.

5.2 Marking — Each container shall be marked legibly with the following information:

- Name and type of the material;
- Manufacturer's name and recognized trade-mark, if any;
- Month and year of manufacture;
- Length and width of the tape;
- Batch number of manufacture, when required; and
- Directions for storage and use, if necessary.

5.2.1 Each roll may also be marked with the Standard Mark.

NOTE — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

*Methods of sampling and test for pressure sensitive adhesive tapes (first revision).

*Methods of sampling and test for pressure sensitive adhesive tapes (first revision).

6. SAMPLING

6.1 The scale for sampling of the material shall be as prescribed in 3 of IS : 8402-1987*.

*Methods of sampling and test for pressure sensitive adhesive tapes (*first revision*).

6.2 Number of Tests — Tests for all the requirements given in 4 shall be conducted on the composite sample.

6.3 Criteria for Conformity — The lot shall be declared as conforming to the specification if the composite sample satisfies all the requirements given in 4.

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 3310131, 3311375

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices:

Telephone

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002 3310131, 3311375

*Eastern : 1/14 C.I.T. Scheme VII M, V.I.P. Road, Maniktola, CALCUTTA 700054 362499

Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036 21843, 31641

Southern : C.I.T. Campus, MADRAS 600113 412442, 412519, 412916

†Western : Manakalaya, E9 MIDC, Marol Andheri (East), BOMBAY 400093 6329295

Branch Offices:

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Peenya Industrial Area, 1st Stage, Bangalore-Tumkur Road, BANGALORE 560058 384955, 384956

Gangotri Complex, 5th Floor, Bhadbhada Road, T.T. Nagar, BHOPAL 462003 66716

Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002 53627

53/5 Ward No. 29, R.G. Barua Road, 5th By-Lane, GUWAHATI 781003 —

5-8-56C L.N. Gupta Marg (Nampally Station Road), HYDERABAD 500001 231083

R14 Yudhister Marg, C Scheme, JAIPUR 302005 63471, 69832

117/418 B Sarvodaya Nagar, KANPUR 208005 216876, 218292

Patliputra Industrial Estate, PATNA 800013 62305

T.C. No. 14/1421, University P.O., Palyam, TRIVANDRUM 695035 62104, 62117

Inspection Offices (With Sale Point) :

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*Sales Office in Calcutta is at 5 Chowringhee Approach, P.O. Princep Street, Calcutta 700072

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